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PATENT  
Docket No. 180.0003 0102

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Nancy D. HANSON et al.

Patent No.: US 6,905,848 B2

Issued: Jun. 14, 2005

For: PRIMERS FOR USE IN DETECTING BETA-LACTAMASES

**Certificate**  
**DEC 19 2005**  
**of Correction**

REQUEST FOR CERTIFICATE OF CORRECTION

Attention Certificate of Correction Branch  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

A Certificate of Correction is requested to be issued correcting printing errors appearing in the above-identified United States patent. Two copies of the text noting the corrections for the Certificate are enclosed. Since none of the errors listed are due to Applicants' mistake, no fee is necessary for the Certificate. The corrections in the proposed Certificate of Correction do not involve such changes in the patent as would constitute new matter or would require reexamination.

Please mail the printed Certificate of Correction to the undersigned attorney.

**CERTIFICATE UNDER 37 C.F.R. 1.8:**

The undersigned hereby certifies that this paper is being deposited in the United States Postal Service, as first class mail, in an envelope addressed to: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 7 day of December, 2005.

Signature: Ann M. Mueing

Printed Name: Ann M. Mueing

Date: December 7, 2005

Respectfully submitted

By

Mueing, Raasch & Gebhardt, P.A.

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**DEC 19 2005**

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UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO.: US 6,905,848 B2

DATED: Jun. 14, 2005

INVENTOR(S): Nancy D. HANSON et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Col. 4, line 10, please delete "*Science*, ," and insert --*Science*, 230--.

Col. 6, line 60, please delete "TIT" and insert --TTT--.

Col. 8, line 66, please delete "GTO" and insert --GTG--.

Col. 23, line 41, please delete "bad" and insert --had--.

Col. 26, line 4, please delete "broth." and insert --broth--.

Col. 29/30, at the end of "Table 9 - continued" immediately following "<sup>b</sup> Resistance to CAZ; ceftazidime, ATM; aztreonam, SXT; trimethoprim/sulfamethoxazole, G; gentamicin.", and directly above "Sequence Listing", please insert the following:

Conjugation Experiments.

The following strains were selected for conjugation with *E. coli* C600N. *E. aerogenes* 187 producing an enzyme with a pl of 6.8 resembling SHV-3; *E. aerogenes* 200 and *E. aerogenes* 220 producing enzymes with pls of 7.8 resembling SHV-4; and *E. aerogenes* 184 producing an enzyme with a pl of 8.2 resembling SHV-5. All the strains also possessed an inducible Bush group 1 beta-lactamase with a pl of 8.3. A plasmid of approximately 50 kb was transferred from *E. aerogenes* 187, *E. aerogenes* 200 and *E. aerogenes* 220 to *E. coli* C600N (Table 10, below). No plasmids were visualized in *E. aerogenes* 184 or its transconjugant *E. coli* JP04/tr (Table 10). Isoelectric focusing performed on the *Enterobacter* strains and their respective transconjugants showed the beta-lactamases resembling SHV-3, SHV-4 and SHV-5 present in both donors and recipients. The transfer of plasmids encoding SHV beta-lactamase genes into *E. coli* C600N was accompanied by resistance to gentamicin and trimethoprim/sulfamethoxazole and decreased susceptibility to cefotaxime, ceftazidime and aztreonam (Table 10).

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MUETING, RAASCH & GEBHARDT, P.A.  
P.O. BOX 581415  
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...**CONTINUED** (at Col. 29/30)

Table 10. Characteristics of *Enterobacter* Strains and Respective Transconjugants

Strains <sup>a</sup>	Plasmids (approximate size, kilobases)	Beta-lactamases (pI)	Most likely Beta- lactamase
<i>E. coli</i> C600N	-	-	-
<i>E. aerogenes</i> 187	50, 10	8.3, 6.8	AmpC, SHV-3
<i>E. coli</i> JP01/tr	50	6.8	SHV-3
<i>E. aerogenes</i> 200	60, 50, 14	8.3, 7.8	AmpC, SHV-4
<i>E. coli</i> JP02/tr	50, 10	7.8	SHV-4
<i>E. aerogenes</i> 220	60, 50, 10	8.3, 7.8	AmpC, SHV-4
<i>E. coli</i> JP03/tr	50	7.8	SHV-4
<i>E. aerogenes</i> 184	-	8.3, 8.2	AmpC, SHV-5
<i>E. coli</i> JP04/tr	-	8.2	SHV-5

a *E. aerogenes* 187, 200, 220 and 184 were donors; *E. coli* C600N served as recipient and JP01, 2, 3 and 4 were the respective transconjugants

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The strains used in the conjugation experiments were selected for amplification with PCR; *E. aerogenes* 187 (pl 6.8), *E. aerogenes* 200 (pl 7.8), *E. aerogenes* 220 (pl 7.8), *E. aerogenes* 184 (pl of 8.2) as well as their respective transconjugants *E. coli* JP01/tr (pl 6.8), *E. coli* JP02/tr (pl 7.8), *E. coli* JP03/tr (pl 7.8) JP04/tr (pl 8.2). Control strains producing SHV-3, SHV-4, SHV-5 and SHV-7 were used as positive controls while *E. coli* C600N was used as a negative control. A 781 base pair fragment specific for SHV beta-lactamases was amplified in *E. aerogenes* 187, *E. aerogenes* 200, *E. aerogenes* 220, *E. aerogenes* 184 and their respective transconjugants as well as the positive controls (Table 10, above). No amplification was observed with *E. coli* C600N (Table 10). Therefore, the ESBLs produced by these strains are indeed derivatives of an SHV beta-lactamase.

The complete disclosures of the patents, patent documents, and publications cited herein are incorporated by reference in their entirety as if each were individually incorporated. Various modifications and alterations to this invention will become apparent to those skilled in the art without departing from the scope and spirit of this invention. It should be understood that this invention is not intended to be unduly limited by the illustrative embodiments and examples set forth herein and that such examples and embodiments are presented by way of example only with the scope of the invention intended to be limited only by the claims set forth herein as follows.

Sequence Listing Free Text

SEQ ID NO:1 - 45 Primer

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*C9K*

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Patent No.: US 6,905,848 B2

Issued: Jun. 14, 2005

Docket No.: 180.0003 0102



Title: PRIMERS FOR USE IN DETECTING BETA-LACTAMASES

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Alexandria, VA 22313-1450

We are transmitting the following documents along with this Transmittal Sheet (which is submitted in triplicate):

- ☒ **Small entity status is entitled to be asserted in the above-identified application.**
- ☒ An itemized return postcard.
- ☐ A Petition for Extension of Time for \_\_ month(s) and a check in the amount of \$\_\_ for the required fee.
- ☐ An Information Disclosure Statement (\_\_ pgs); copies of \_\_ applications; 1449 forms (\_\_ pgs); and copies of \_\_ documents cited on the 1449 forms.
- ☐ A request for continued examination (RCE) and a check in the amount of \$\_\_, for the required filing fee.
- ☒ Other: REQUEST FOR CERTIFICATE OF CORRECTION (1 p); Certificate of Correction (3 pgs -- in duplicate).

Fee Calculation for Claims Pending After Amendment					
	Pending Claims after Amendment (1)	Claims Paid for Earlier (2)	Number of Additional Claims (1-2)	Cost per Additional Claim	Additional Fees Required
Total Claims				x \$25 =	
Independent Claims				x \$100 =	
One or More New Multiple Dependent Claims Presented? If Yes, Add \$180 Here →					
Total Additional Claim Fees Required					\$0

**Please consider this a PETITION FOR EXTENSION OF TIME for a sufficient number of months to enter these papers and please charge any additional fees or credit overpayment to Deposit Account No. 13-4895. Triplicate copies of this sheet are enclosed.**

**CERTIFICATE UNDER 37 C.F.R. §1.8:** The undersigned hereby certifies that this Transmittal Letter and the paper(s), as described hereinabove, are being deposited in the United States Postal Service, as first class mail, in an envelope addressed to: Attention Certificate of Correction, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 7 day of December, 2005.

MUETING, RAASCH & GEBHARDT, P.A.  
Customer Number: 26813

By: *Ann M. Mueeting*  
Name: Ann M. Mueeting  
Reg. No.: 33,977  
Direct Dial: 612-305-1217  
Facsimile: 612-305-1228

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